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L24	L23 and (modified or phosphoro$)	23	L24
L23	L22 and telomere$	33	L23
L22	G near quadruplex or G-quadruplex	69	L22
L21	L20 and (GGGG or G4 or guanine near rich)	44	L21
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L19	L18 and (modified or phosphoro$)	39	L19
L18	oligonucleotide$ near15 telomere near5 length$	44	L18
L17	oligonucleotide$ and telomere near5 length$	440	L17
L16	L12 and phosphoro$	68	L16
L15	L14 and aging	2	L15
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L12	$5GGGGTGGGG	221	L12
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L10	$GGGGTGGGG	234	L10
L9	GGGGGGGGG	18	L9
L8	GGGGCGGGG	22	L8
L7	GGGGAGGGG	9	L7
L6	5489508 [pn]	2	L6
L5	L1 and phosphorothioate$	37	L5
L4	L2 and phosphorothioate$	0	L4
L3	l2 and modified	1	L3
L2	GGGGTGGGG	2	L2
L1	GGGGGG	96	L1

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☐ 1. 20040229894. 10 Feb 04. 18 Nov 04. Inhibition of human teomerase by a G-quadruplex-interaction compound. Kerwin, Sean M., et al. 514/279; 546/37 A61K031/4745 C07D471/02.

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1: J Pediatr Hematol Oncol. 2004 Jun;26(6):342-50.

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Telomere length and telomerase activity: variations with advancing age and potential role in childhood malignancies.

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Telomeres, representing the chromosome nucleoprotein tails, shorten during each cell division due to the inability of conventional DNA polymerases to completely replicate the chromosome termini. When telomeres become critically short, cells are directed to exit from the cell division cycle (replicative senescence). Telomerase is a reverse transcriptase that synthesizes telomeric sequences, thereby prolonging the lifespan of cells. Telomere length and telomerase activity expression vary significantly in different normal somatic tissues and age groups. In many childhood malignancies (ie, acute leukemias and solid tumors), telomere length and telomerase activity of the malignant cell population may be correlated with the disease outcome and thus may be promising tools in evaluating prognosis and monitoring treatment progress. Finally, telomerase inhibition by using several strategies (ie, antisense oligonucleotides) represents a potentially valuable target for antitumor therapy in the near future.

Publication Types:

- Review
- Review, Tutorial

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Lippincott Williams & Wilkins

Journal of Pediatric Hematology/Oncology

Telomere Length and Telomerase Activity: Variations With Advancing Age and Potential Role in Childhood Malignancies.

Journal of Pediatric Hematology/Oncology. 26(6):342-350, June 2004.

Polychronopoulou, Sophia MD; Koutroumba, Paraskevi MD

Abstract:

colon; Telomeres, representing the chromosome nucleoprotein tails, shorten during each cell division due to the inability of conventional DNA polymerases to completely replicate the chromosome termini. When telomeres become critically short, cells are directed to exit from the cell division cycle (replicative senescence). Telomerase is a reverse transcriptase that synthesizes telomeric sequences, thereby prolonging the lifespan of cells. Telomere length and telomerase activity expression vary significantly in different normal somatic tissues and age groups. In many childhood malignancies (ie, acute leukemias and solid tumors), telomere length and telomerase activity of the malignant cell population may be correlated with the disease outcome and thus may be promising tools in evaluating prognosis and monitoring treatment progress. Finally, telomerase inhibition by using several strategies (ie, antisense oligonucleotides) represents a potentially valuable target for antitumor therapy in the near future.